

Finding Friction: Coaster-Car Inspections

Read the first two paragraphs on p. 41. Then scan pp. 41-43. What are the four ways you are going to test your coaster car for friction?



Test	Description

Procedure: Now go back and read through each procedure. Describe what you will be observing in each test. Perform each procedure with your group and complete the “Sources of Friction” sheet.

Try to think of other ways you can inspect your cars. Record your ideas below, and suggest them to the class when you review your findings.

Read **Systems and Systems Within Systems** on p. 43.
What is the difference between a system and a subsystem?

What is one example of a subsystem in your coaster car?



Communicate: Share your observations with the class, using your coaster car to show where you found each source of friction. Use your “Sources of Friction” sheet to guide you presentation.

Discuss findings with your class and fill in the following chart:

Sources of Friction	Evidence	Effects	How to reduce

Read “Reducing Friction” on pg. 44-45.

Friction between two surfaces depends on what two factors?

1.

2.

Name 4 ways friction can be reduced.

1.

2.

3.

4.

How do bearings help to reduce friction?

How do balls and rollers reduce friction?

Read “Lubrication” on the top of pg. 46.

How does lubrication reduce friction?

Name 2 common lubricants.

1.

2.



Reflect: Review your “Sources of Friction” page with your group. Use what you have just read and come up with ideas about how to reduce the friction of your coaster car. Record those ideas in the space below.

What’s the Point? Read the bottom of pg. 46. Which of the 4 ways to reduce friction will your group try with your coaster car?